

REMARKS

Claims 1 and 20 have been amended. Claim 21 has been added. Claims 1, 5-7, 11-13 and 15-21 remain for further consideration. No new matter has been added.

The objections and rejections shall be taken up in the order presented in the Official Action.

2. The title has been amended as set forth above.
3. Claim 1 currently stands rejected under 35 U.S.C. §102 for allegedly being anticipated by the subject matter disclosed in U.S. Patent 64,835,467 to Gokhale (hereinafter "Gokhale").

As amended claim 1 recites a method that includes:

“comparing the amplitude of the pulses of the pulse train output signal with a first variable switching threshold value to provide an output signal;
receiving the output signal to detect a synchronization signal and provide a sync signal indicative thereof; and
adjusting said switching threshold value when the difference between the amplitudes of the pulses and said switching threshold value exceeds a fixable first maximum value and said sync signal is valid.” (cl. 1, emphasis added).

Significantly, claim 1 recites comparing the amplitude of the received pulse and the threshold value, and adjusting the value of the threshold when the difference between the amplitudes of the pulses and the threshold value exceeds a certain value. In contrast, with respect to FIG. 4 Gokhale simply discloses comparing the output signal from the sensor V_o against a filtered low pass filtered version of the output signal, which is shown in FIG. 4 as V_{ref} . That is, V_{ref} is a low pass filtered version of V_o . The signal conditioning circuit illustrated in FIG. 4 simply removes the DC bias associated with the signal V_o . Gokhale is incapable of anticipating the subject

matter recited in claim 1, since claim 1 requires that the switching threshold value be adjusted “...when the difference between the amplitudes of the pulses and said switching threshold value exceeds a fixable first maximum value....” (cl. 1). In contrast, in Gokhale the threshold value is adjusted whenever there is any difference between the past value and the current value of the signal V_{ref} . That is, the low pass filter of Gokhale adjusts its output value any time there is any difference between the current value of the input signal and the past value of the output signal.

In addition, the method of claim 1 recites that the threshold adjustment occurs when “*the difference between the amplitudes of the pulses and said switching threshold value exceeds a fixable first maximum value and said sync signal is valid.*” (emphasis added, cl. 1). Gokhale neither discloses nor suggests the use of a sync signal. In addition, since Gokhale uses the output of a low pass filter to provide the threshold value as shown in FIG. 4, there is no suggestion to even consider placing a condition on when the threshold can be changed – Gokhale simply allows the threshold to change at anytime.

A 35 U.S.C. § 102 rejection requires that a single reference teach each and every element of the claimed invention. Gokhale is incapable of anticipating claim 1 since it fails to disclose (or even suggest) “*adjusting said switching threshold value when the difference between the amplitudes of the pulses and said switching threshold value exceeds a fixable first- maximum value when said sync signal is valid.*” (cl. 1).

Claims 20 and 21 are patentable for at least the same reason(s) as claim 1.

4. The indication that claims 5-7, 11-13 and 15-19 contain allowable subject matter is noted and appreciated.

These claims have not been written into independent claim format since claim 1 is patentable for at least the reasons set forth above.

For all the foregoing reasons, reconsideration and allowance of claims 1, 5-7, 11-13 and 15-21 is respectfully requested.

If a telephone interview could assist in the prosecution of this application, please call the undersigned attorney.

Respectfully submitted,

A handwritten signature in cursive script, reading "Patrick O'Shea", written in black ink. The signature is fluid and stylized, with a large initial "P" and a long, sweeping underline.

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